ENERGY FACILITY SITE EVALUATION COUNCIL
P.O. BOX 43172
OLYMPIA, WASHINGTON 98504-3172

IN THE MATTER OF:	]	**NO. EFSEC/00-01**
Sumas Energy 2	]	**DRAFT APPROVAL OF THE PREVENTION OF**
Generation Facility	]	**SIGNIFICANT DETERIORATION AND**
Sumas Energy 2, Inc.	]	**NOTICE OF CONSTRUCTION**
Sumas, WA		

Important Note: The following is a DRAFT Notice of Construction/Prevention of Significant Deterioration (NOC/PSD) Permit for the proposed Sumas Energy 2 Generation Facility Project. This Draft NOC/PSD Permit was written on behalf of the Energy Facility Site Evaluation Council (EFSEC) by its contractor, the Department of Ecology, Air Quality Program.

EFSEC and EPA rules (Chapter 463-39 Washington Administrative Code and 40 CFR 51.166(q) and 40 CFR 124 subparts A and C) require EFSEC to prepare a draft PSD Permit and Fact Sheet. The Fact Sheet discusses the project and issues considered in preparing the draft Permit. The Fact Sheet developed for this draft Permit is available to anyone who wishes a copy. THE ISSUANCE OF THIS DRAFT FACT SHEET AND DRAFT PSD PERMIT SHOULD IN NO WAY BE INTERPRETED TO REPRESENT CONCLUSIONS, CONDITIONS OR RECOMMENDATIONS TO THE GOVERNOR OF WASHINGTON STATE DRAWN BY THE ENERGY FACILITY SITE EVALUATION COUNCIL.

EFSEC finds the following pursuant to

the Energy Facility Site Evaluation Council (EFSEC) regulations for

air permit applications (Washington Administrative Code 463-42-385),

General and Operating Permit Regulations for Air Polluting Sources (Washington Administrative Code 463-39),

the Washington Department of Ecology (Ecology) regulations for

new source review (Washington Administrative Code 173-400-110 and Chapter 174-460 WAC),

the federal Prevention of Significant Deterioration regulations (40 CFR 52.21),

the complete Notice of Construction/Prevention of Significant Deterioration Application submitted

by Sumas Energy 2, Inc. and

the technical analysis performed by Ecology for EFSEC:

FINDINGS (Applicable to both the Prevention of Significant Deterioration and Notice of Construction Approval)

1. Sumas Energy 2, Inc. has applied to construct the Sumas Energy 2 Generation Facility (S2GF) which will be located in Sumas, Washington. The proposed project includes two separate but identical combustion gas turbines, one steam turbine, three electric generators, and two heat recovery steam generators (HRSG). Total power generating capacity is 660 megawatts (MW). Siemens-Westinghouse has been selected as the turbine supplier. Annual emission rates and resulting environmental impacts have been evaluated for the maximum anticipated emissions .

2. The project is subject to federal Prevention of Significant Deterioration (PSD) regulations under Title 40 Code of Federal Regulations (CFR) 52.21 because it is one of 28 listed industries that becomes a "major source," when emitting more than 100 tons per year of any regulated pollutant. Each pollutant emitted above Significant Emission Rate thresholds must satisfy requirements under PSD. S2GF has the potential to emit quantities of nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter (PM_{10}), volatile organic compounds (VOCs), sulfur dioxide (SO_2), and sulfuric acid mist (H_2SO_4) above the Significant Emission Rate thresholds. In addition, S2GF has the potential to emit toxic air pollutants in quantities sufficient to require consideration under state new source review regulations.

3. The site of the proposed project is within a Class II area that is in attainment with regard to all pollutants regulated by the National Ambient Air Quality Standards (NAAQS) and state air quality standards. The site is 55 kilometers (km.) from the nearest Class I Area, North Cascades National Park, within 175 km. of four other Class I areas (Alpine Lakes Wilderness, Glacier Peak Wilderness, Olympic National Park, and Pasayten Wilderness), and within one-half mile of the Canadian border.

4. The project is subject to the following requirements:

General and operating permit regulations for air pollution sources chapter 463-39 WAC.

New source review under Chapter 173-400 WAC, Chapter 173-460 WAC, 40 CFR 52.21, 40 CFR 60.40a, 40 CFR 60.330;

Emission monitoring under Chapter 70.94 RCW, Chapter 173-400 WAC, 40 CFR 60 Appendices A, B, and F, and 40 CFR 75;

Gas fuel monitoring under 40 CFR 60.334(b)(2), and to oil fuel requirements in 40 CFR 60.49b(r).

5. Sumas Energy 2, Inc.'s prevention of significant deterioration/notice of construction (PSD/NOC) application for the proposed project was determined to be complete on June 8, 2000

6. The project will use pipeline quality natural gas as the primary fuel. On-road specification (very low sulfur content) distillate oil may be used during periods of natural gas curtailment.

7. Best available control technology (BACT) as required under WAC 173-400-113 (2) and toxic best available control technology (T-BACT) as required under WAC 173-460-040(4) will be used for the control of all air pollutants which will be emitted by the proposed project.

8. The following have been determined to be BACT for this project:

Use of standard dry low NO_x burners with selective catalytic reduction (SCR) for NO_x control.

Catalytic oxidation for CO control.

Good combustion practice, using only natural gas and on-road specification, low-sulfur distillate oil with less than 0.05% sulfur as fuel, and minimizing oil-firing for VOC, PM_{10}, sulfur oxides, and organic toxic air pollutants control.

SCR with a 10 ppmdv ammonia slip limit for ammonia control.

9. The facility will have the potential to emit up to 156 tons per year of nitrogen oxides (NO_x).

10. The facility will have the potential to emit up to 106 tons per year of carbon monoxide (CO).

11. The facility will have the potential to emit up to 156 tons per year of volatile organic compounds (VOCs).

12. The facility will have the potential to emit up to 223 tons per year of particulate matter smaller than 10 microns (PM_{10}, combined filterable and condensable).

13. The facility will have the potential to emit up to 45 tons per year of sulfur oxides (SO_2 and SO_3 or H_2SO_4 measured as SO_2).

14. The facility will have the potential to emit up to 9.3 tons per year of sulfuric acid mist (H_2SO_4). This has also been counted in Finding # 13, above.

15. The facility will have the potential to emit 272 tons per year of ammonia.

16. With the exception of sulfuric acid mist under oil-firing, no single toxic air pollutant from the facility is expected to exceed 20% of the acceptable source impact level specified in Chapter 173-460 WAC. Discounting any neutralization by reaction with the ammonia slip, sulfuric acid mist under oil-firing at permit limits may be just slightly less than the acceptable source impact level specified in Chapter 173-460 WAC.

The average emission level of toxic air pollutants is expected to be less than 5% of the acceptable source impact level specified in Chapter 173-460 WAC.

17. Allowable emissions from the new emissions units will not cause or contribute to air pollution in violation of:

17.1. Any ambient air quality standard;

17.2. Any applicable maximum allowable increase over the baseline ambient concentration.

18. Ambient impact analysis indicates that there will be no significant impacts resulting from pollutant deposition on soils and vegetation in the Class I areas: Alpine Lakes Wilderness, Glacier Peak Wilderness, North Cascades National Park, Olympic National Park, and Pasayten Wilderness, the proposed Class I area, the Mt. Baker Wilderness, or in analogous areas in nearby British Columbia, Canada.

19. Ambient impact analysis indicates that it is very unlikely that the proposed emissions will cause significant degradation of regional visibility, or impairment of visibility in any Class I area.

20. No significant effect on industrial, commercial, or residential growth in the Sumas area is anticipated due to the project.

21. EFSEC finds that all requirements for new source review (NSR) and PSD are satisfied and that as approved below, the new emissions units comply with all applicable federal new source performance standards. Approval of the PSD/NOC application is granted subject to the following conditions.

PREVENTION OF SIGNIFICANT DETERIORATION APPROVAL CONDITIONS

1. The combustion turbines shall be fueled primarily by pipeline quality natural gas. Use of on-road specification, very low sulfur content distillate oil (also called “diesel fuel” as defined in 40 CFR § 80.2(x), referred to as "oil" throughout the remainder of this Approval) is allowed in the event of natural gas curtailment and for maintenance and testing of the oil feed system.

    1.1 Sulfur content at the time of purchase of oil to be used as fuel must conform with the then current limit applied to on-road specification oil as defined in the Code of Federal Regulations (at the time of issuance of this permit, defined in 40 CFR § 80.29(a)(i)).

    1.2 Cumulative annual use of oil as fuel is not to exceed 15 days or 9,070,560 gallons of oil. Average use of oil as fuel over any ten year rolling period is not to exceed 10 days per year or 6,047,040 gallons per year.

1.3 The oil fuel fired emergency generator shall not exceed 400 kW and shall not be operated in excess of 500 hours per year. The following records regarding the emergency generator shall be maintained current and kept at the facility:

1.3.1 Equipment type, make and model, maximum power input/output.

1.3.2 A monthly log of reason for operation, hours of operation, fuel type, quantity, and sulfur content.

1.4 The oil fuel fired engine for driving the water pump(s) for emergency fire suppression shall not exceed 300 HP and shall be operated only as needed for its maintenance and for emergency fire suppression. The following records regarding this engine shall be maintained current and kept at the facility:

1.4.1 Equipment type, make and model, maximum power input/output.

1.4.2 A monthly log of reason for operation, hours of operation, fuel type, quantity, and sulfur content.

2. When burning natural gas, no HRSG stack exhaust shall contain NO_X emissions that exceed 2.0 parts per million on a dry volumetric basis (ppmdv) over a one hour average when corrected to 15.0 percent oxygen. When burning oil, no HRSG stack exhaust shall contain NO_X emissions that exceed 6.0 ppmdv (one hour average corrected to 15.0 percent oxygen). No HRSG stack exhaust shall exceed daily NO_X emissions of 179 kilograms (395 pounds) when burning natural gas or 538 kilograms (1,185 pounds) when burning oil.

Initial performance and compliance for each turbine shall be determined in accordance with Title 40 CFR Part 60, Subpart GG and Appendix A, Reference Method 20, except that the instrument span shall be 6 ppm or less for testing under gas-firing and 18 ppm or less for testing under oil-firing. An alternate method may be used if approved in advance by EFSEC.

Continuous compliance will be determined by a continuous emission monitoring system (CEMS) that measures and records NO_X and O_2 emissions and exhaust gas flow rate from

each exhaust stack. The CEMS shall meet the requirements of Prevention of Significant Deterioration Approval Condition 12.2.

Mass emission rates shall be determined using the appropriate procedures outlined in 40 CFR part 60 Appendix A Method 19. An equivalent mass emission rate test method may be used if approved in advance by EFSEC.

3. When burning natural gas, no HRSG stack exhaust shall contain CO emissions that exceed 2.0 parts per million on a dry volumetric basis (ppmdv) over a one hour average when corrected to 15.0 percent oxygen. When burning oil, no HRSG stack exhaust shall contain CO emissions that exceed 12.0 ppmdv (one hour average corrected to 15.0 percent oxygen). No HRSG stack exhaust shall exceed daily CO emissions of 108 kilograms (240 pounds) when burning natural gas or 655 kilograms (1440 pounds) when burning oil.

Initial performance and compliance for each turbine shall be determined by EPA Reference Method 10 modified to use nondispersive infrared (NDIR) with gas filter correlation, and following the calibration and operation guidelines of EPA Reference Method 6C. The NDIR must have performance specifications allowing a minimum detectable sensitivity of 1 ppmdv with accuracy within +/- 0.5 ppmdv. The span and linearity calibration gas concentrations in Method 10 shall be appropriate to the CO concentration limits specified in this condition. Mass emission rates shall be determined using the appropriate procedures outlined in 40 CFR part 60 Appendix A Method 19. Equivalent concentration and mass emission rate test methods may be used if approved in advance by EFSEC. An alternate method may be used if approved in advance by EFSEC.

CO emissions from each exhaust stack shall be measured and recorded by CEMS that meet the requirements of Prevention of Significant Deterioration Approval Condition 12.1. Such CEMS shall be used to determine compliance with this Condition.

4. When burning natural gas, no HRSG stack exhaust shall contain SO_2 emissions that exceed 1.0 parts per million on a dry volumetric basis (ppmdv) over a one hour average when corrected to 15.0 percent oxygen. When burning oil, no HRSG stack exhaust shall contain

SO_2 emissions that exceed 10.0 ppmdv (one hour average corrected to 15.0 percent oxygen). No HRSG stack exhaust shall exceed daily SO_2 emissions of 41 kilograms (90 pounds) when burning natural gas or 408 kilograms (900 pounds) when burning oil.

Initial performance and compliance for each turbine shall be determined by EPA Reference Method 6C. The instrument span shall be at maximums of 3 ppm when natural gas is burned, and 30 ppm when oil is burned. All span and calibration gases used shall follow in accordance with the method requirements. An alternate method may be used if approved in advance by EFSEC.

Continuous emission monitoring of SO_2 is not required. Continuous compliance with the limit for each stack shall be by means of fuel sulfur content reporting and fuel flow monitoring to each turbine in accordance with Prevention of Significant Deterioration Approval Conditions 14, 15, and 16, below.

5. When burning natural gas, no HRSG stack exhaust shall contain VOC emissions that exceed 6.0 parts per million on a dry volumetric basis (ppmdv) over a one hour average when corrected to 15.0 percent oxygen. When burning oil, no HRSG stack exhaust shall contain VOC emissions that exceed 10.0 ppmdv (one hour average corrected to 15.0 percent oxygen). No HRSG stack exhaust shall exceed daily VOC emissions of 190 kilograms (420 pounds) when burning natural gas or 269 kilograms (593 pounds) when burning oil.

Initial performance and compliance for each turbine and boiler shall be determined by EPA Reference Methods 18. Mass emission rates shall be determined using the appropriate procedures outlined in 40 CFR part 60 Appendix A Method 19. Equivalent concentration and mass emission rate test methods may be used if approved in advance by EFSEC.

Source testing must be conducted annually for the first three years following initial startup to demonstrate continued compliance. Test methods shall be the same as used for the initial performance test unless approved in advance by EFSEC. Initial startup for each combustion turbine is defined as the time when the first electricity from that turbine is delivered to the

electrical power grid. Testing thereafter will be once every three years if the initial performance and subsequent tests satisfy permit limits. Failure of any source test to meet permit limits starts the three year annual test cycle over.

6. No HRSG stack exhaust shall exceed daily filterable PM_{10} emissions of 87 kilograms (192 pounds) per day whether burning natural gas or oil.

Initial performance and compliance with the particulate standard shall be determined by federal Reference Methods 201 or 201A based on the filterable portion ("front half") of the test method capture. Mass emission rates shall be determined using the appropriate procedures outlined in 40 CFR part 60 Appendix A Method 19. Equivalent concentration and mass emission rate test methods may be used if approved in advance by EFSEC.

Source testing must be conducted annually for the first three years following initial startup to demonstrate continued compliance. Test methods shall be the same as used for the initial performance test unless approved in advance by EFSEC. Initial startup for each combustion turbine is defined as the time when the first electricity from that turbine is delivered to the electrical power grid. Testing thereafter will be once every three years if the initial performance and subsequent tests satisfy permit limits. Failure of any source test to meet permit limits starts the three year annual test cycle over.

7. No HRSG stack exhaust shall exceed daily H_2SO_4 emissions of 8.5 kilograms (18.6 pounds) when burning natural gas or 85 kilograms (186 pounds) when burning oil.

Initial performance and compliance with the H_2SO_4 emissions limits shall be determined by EPA Reference Method 8 with incorporation of the procedures given in EPA Reference Method 6, Section 7.3 for elimination of ammonia interference, or an equivalent method approved in advance by EFSEC.

Source testing must be conducted annually for the first three years following initial startup to demonstrate continued compliance. Test methods shall be the same as used for the initial performance test unless approved in advance by EFSEC. Initial startup for each combustion turbine is defined as the time when the first electricity from that turbine is delivered to the

electrical power grid. Testing thereafter will be once every three years if the initial performance and subsequent tests satisfy permit limits. Failure of any source test to meet permit limits restarts the three year annual test cycle.

8. All conditions apply except during unit startup and shutdowns. Emissions in excess of the above limits shall be considered unavoidable provided the source reports the exceedance in accordance with Prevention of Significant Deterioration Approval Condition 16, below. The duration of startup or shutdown periods are limited to 3 hours per occurrence, with a maximum of two startups per 24 hour period, and 200 startups per year per turbine.

9. Within 180 days after initial start-up of each turbine, S2GF shall conduct performance tests for NO_X, SO_2, H_2SO_4, CO, VOCs and PM_{10} on each combustion turbine. The performance tests shall be performed by an independent testing firm. A test plan shall be submitted for EFSEC's approval at least 30 days prior to the testing.

10. Sampling ports and platforms shall be provided on each stack, after the final pollution control device. The ports shall meet the requirements of 40 CFR, Part 60, Appendix A Method 20.

11. Adequate permanent and safe access to the test ports shall be provided. Other arrangements may be acceptable if approved by EFSEC prior to installation.

12. Continuous Emission Monitoring Systems

    12.1 Continuous emission monitoring systems (CEMS) for CO, shall satisfy the requirements contained in 40 CFR, Part 60, Appendix B, Performance Specifications and 40 CFR, Part 60, Appendix F, Quality Assurance Procedures.

    12.2 CEMS for NO_x, O_2, and exhaust gas flow rate or velocity compliance shall satisfy the requirements contained in 40 CFR 75, Emissions Monitoring.

13. Compliance testing shall be performed for PM_{10}, VOCs, and H_2SO_4 from each stack annually for the first three years following initial startup, and once every 3 years thereafter as long as compliance continues to be demonstrated. Source testing for these parameters is

to coincide with the Relative Accuracy Test Audit required for each installed CEMS.

14. CEMS and process data shall be reported in written form to the authorized representative of EFSEC and to the EPA Region X Office of Air Quality at least monthly (unless a different report form/format, testing and reporting schedule has been approved by EFSEC) within thirty days of the end of each calendar month which shall include but not be limited to the following:

14.1 Quantity and average sulfur content of natural gas burned as substantiated by purchase records and vendor's report. Fuel sulfur content determination shall follow procedures outlined in 40 CFR 60.335(d) and (e).

14.2 Quantity of oil burned for system testing and maintenance, quantity of oil burned because of natural gas curtailment, total quantity of oil burned, total duration of time oil is burned, and sulfur content of all oil purchased (as substantiated by copies of receipts from the oil supplier) since the last report.

14.3 For each stack, the daily average NO_x and CO concentrations, in ppmdv corrected to 15% oxygen .

14.4 For the project, total mass emissions of NO_x and CO on daily (pounds per day) and twelve month moving total (tons per year) bases.

14.5 The duration and nature of any monitor down-time excluding zero and span checks.

14.6 Results of any monitor audits or accuracy checks.

14.7 Results of any required stack tests.

14.8 The above data shall be retained at the S2GF site for a period of five years.

15. The format of the reporting described in Condition 14 shall match that required by EPA for demonstrating compliance with the Title IV Acid Rain program reporting requirements. Pollutants not covered by that format shall be reported in a format approved by EFSEC that shall include at least the following:

15.1. Process or control equipment operating parameters.

15.2. The hourly maximum and average concentration, in the units of the standard, for each pollutant monitored.

15.3. The duration and nature of any monitor down time.

15.4. Results of any monitor audits or accuracy checks.

15.5. Results of any required stack tests.

16. For each occurrence of monitored emissions in excess of the standard, the monthly emissions report (per Prevention of Significant Deterioration Approval Condition 14) shall include the following:

16.1 For parameters subject to monitoring and reporting under the Title IV Acid Rain program, the reporting requirements in that program shall govern excess emissions report content.

16.2 For all other pollutants:

16.2.1. The time of the occurrence.

16.2.2. Magnitude of the emission or process parameters excess.

16.2.3. The duration of the excess.

16.2.4. The probable cause.

16.2.5. Corrective actions taken or planned.

16.2.6. Any other agency contacted.

17. Operating and maintenance manuals for all equipment that has the potential to affect emissions to the atmosphere shall be developed and followed. Copies of the manuals shall be available to EFSEC or the authorized representative of EFSEC. Emissions that result from a failure to follow the requirements of the manuals may be considered proof that the equipment was not properly operated and maintained.

18. Operation of the equipment that has the potential to affect the quantity and nature of emissions to the atmosphere must be conducted in compliance with all data and

specifications submitted as part of the PSD/NOC application unless otherwise approved by EFSEC.

19. This approval shall become invalid if construction of the project is not commenced within eighteen (18) months after receipt of final approval, or if construction of the facility is discontinued for a period of eighteen (18) months, unless EFSEC extends the 18 month period upon a satisfactory showing that an extension is justified, pursuant to 40 CFR 52.21(r)(2) and applicable EPA guidance.

20. Any activity that is undertaken by S2GF or others, in a manner that is inconsistent with the application and this determination, shall be subject to EFSEC enforcement under applicable regulations. Nothing in this determination shall be construed so as to relieve S2GF of its obligations under any state, local, or federal laws or regulations.

21. The S2GF shall notify EFSEC in writing at least thirty days prior to start-up of the project.

22. Access to the source by EFSEC or the authorized representative of EFSEC shall be permitted upon request for the purpose of compliance assurance inspections. Failure to allow access is grounds for revocation of this determination of approval.

This Prevention of Significant Deterioration Permit has been Reviewed by:

_____ _____

Bernard Brady, P.E. Date
Engineering and Technical Services
Washington Department of Ecology

This Prevention of Significant Deterioration Permit has been Approved by:

_____ _____

Barbara McAllister Date
Director, Office of Air Quality
U.S. Environmental Protection Agency, Region X

_____ _____

Deborah Ross Date
Chair
Energy Facility Site Evaluation Council

NOTICE OF CONSTRUCTION APPROVAL CONDITIONS

1. S2GF will comply with all Prevention of Significant Deterioration approval conditions specified above.

2. Total emissions of free NH_3 and ammonium salts measured as NH_3 from each HRSG exhaust stack shall not exceed 10 parts per million on a volumetric basis (ppmdv) over a one hour average when corrected to 15.0 percent oxygen .

   Initial compliance for each turbine shall be determined by Bay Area Air Quality Management District Source Test Procedure ST-1B, "Ammonia, Integrated Sampling", or an equivalent method approved in advance by EFSEC. Source test samples must be unfiltered as taken from each stack. Source testing must be conducted annually for the first three years following initial startup to demonstrate continued compliance. Initial startup for each combustion turbine is defined as the time when the first electricity from that turbine is delivered to the electrical power grid. Testing thereafter will be once every three years if the initial performance and subsequent tests satisfy permit limits. Failure of any source test to meet permit limits starts the three year annual test cycle over.

   Coincident ammonia consumption and fuel use shall be recorded daily and reported monthly. The initial and first three years' source tests shall be used by EFSEC to establish a base line relating the of ammonia-consumption:fuel-use ratio to ammonia emissions. EFSEC or its delegated compliance agent may require ammonia source testing at any time that this relationship indicates ammonia emissions may be exceeding the permit limitation.

3. Opacity from each exhaust stack of the project shall not exceed 10 percent over a six minute average as measured by EPA Reference Method 9, or an equivalent method approved in advance by EFSEC. Opacity from each stack shall be measured and recorded by continuous emissions monitoring systems (CEMS). Each CEMS shall satisfy the requirements contained in 40 CFR, Part 60, Appendix B, Performance Specification 1 and 40 CFR, Part 60, Appendix F, Quality Assurance Procedures.

4. All conditions apply except during unit startup and shutdowns. Requirements relative to

startup and shutdown shall follow Prevention of Significant Deterioration Approval Condition 8, above.

5. Within 180 days after initial start-up of each turbine, S2GF shall conduct performance tests for NH_3 and opacity on each combustion turbine, to be performed by an independent testing firm. A test plan shall be submitted for EFSEC's approval at least 30 days prior to the testing.

6. Ammonia consumption and fuel use data and opacity observations shall be reported in written form to the authorized representative of EFSEC at least monthly (unless a different report form/format, and reporting schedule has been approved by EFSEC) within thirty days of the end of each calendar month.

7. For each opacity observation in excess of the standard, the monthly report (per Notice of Construction Approval Condition 6) shall include the following:

   7.1 The time of the occurrence.

   7.2 Magnitude of the emission or process parameters excess.

   7.3 The duration of the excess opacity.

   7.4 The probable cause.

   7.5 Corrective actions taken or planned.

   7.6 Any other agency contacted.

8. Prevention of Significant Deterioration Approval Conditions 17 through 22 (operating/maintenance manuals, operation consistent with the PSD/NOC application, construction commencement time limit, enforcement, startup notification, and access to the facility) are also conditions of this Notice of Construction Order of Approval.

This Notice of Construction Approval has been Reviewed by:

_____ _____

Bernard Brady, P.E. Date
Engineering and Technical Services
Washington Department of Ecology

This Notice of Construction Approval has been Approved by:

_____ _____

Deborah Ross Date
Chair
Energy Facility Site Evaluation Council

392 APPENDIX A – SUMMARY OF EMISSION LIMITATIONS for PSD EFSEC/00-01

EMISSIONS LIMITS[1] SUMAS ENERGY 2 GENERATION FACILITY COMBUSTION TURBINE WITH DRY LOW NO_X TECHNOLOGY, SELECTIVE CATALYTIC REDUCTION, AND OXIDATION CATALYST (PER TURBINE)						
Pollutant	**Natural Gas Fuel**		**Oil Fuel**		**Test Method (or equivalent approved by EFSEC)**	**Stack Testing or Certification Frequency**
	Limit	**Averaging Time**	**Limit**	**Averaging Time**		
NO_x @15% O_2	2.0 ppmdv 395 lb/day	1 hour daily	6.0 ppmv 1,185 lb/day	1 hour daily	RM 20 and CEMs	Initial
CO @ 15% O_2	2.0 ppmdv 10 lb/hr	1 hour 1 hour	12.0 ppmdv 60 lb/hr	1 hour 1 hour	RM 10 and CEMs	Initial
SO_2	1.0 ppmdv 3.75 lb/hr	1 hour	10.0 ppmdv 37.5 lb/hr	1 hour	RM 6 and fuel monitoring	Initial
PM_{10}	192 lb/day	daily	192 lb/day	daily	RM 201 or 201A	Initial, annual for 3 years, once per five years thereafter as long as in compliance
VOC	6.0 lb/hr 420 lb/day	1 hour daily	11.5 lb/hr 593 lb/day	1 hour daily	RM 25A or 25B	Initial, annual for 3 years, once per five years thereafter as long as in compliance
Sulfuric Acid Mist	0.35 lb/hr	1 hour	20.0 lb/hr	1 hour	RM 8	Initial, annual for 3 years, once per five years thereafter as long as in compliance
Ammonia	10 ppmdv	1 hour	10 ppmdv	1 hour	by BAAQMD Source Test Procedure ST-1B	Initial, annual for 3 years, once per five years thereafter as long as in

EMISSIONS LIMITS[1] SUMAS ENERGY 2 GENERATION FACILITY COMBUSTION TURBINE WITH DRY LOW NO_X TECHNOLOGY, SELECTIVE CATALYTIC REDUCTION, AND OXIDATION CATALYST (PER TURBINE)						
Pollutant	**Natural Gas Fuel**		**Oil Fuel**		**Test Method (or equivalent approved by EFSEC)**	**Stack Testing or Certification Frequency**
	Limit	**Averaging Time**	**Limit**	**Averaging Time**		
						compliance
Opacity	10%	6 minute	10%	6 minute (one daily reading)	RM 9	Initial and 6 month reader certification

1. This table is a summary of the permit's conditions. If there is a conflict between this table and a permit provision, the written permit provision takes precedence.